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PUNCHOUT OPERATIONAL DOCUMENT

JPL and the Subcontractor agree to allow the procurement of Subcontractor items through the punchout mechanism. JPL shoppers will click on a link within the JPL Oracle iProcurement system to punchout to the Subcontractor shopping site, search for items on the site and then return back to the JPL Oracle iProcurement system with those items.

Upon execution of the subcontract between JPL and the Subcontractor, the Subcontractor agrees to provide JPL within forty-five (45) working days access to a shopping site for punchout testing purposes. See Appendix 2 - Punchout Checklist. The shopping site should be identical in functionality and in look and feel to the Subcontractor shopping site that JPL shoppers will access from JPL's production instance. The Subcontractor will complete the Punchout Checklist accompanying this exhibit and submit it to JPL for testing purposes. In addition, the Subcontractor will also complete the same checklist for the shopping site that JPL shoppers will access from JPL's production instance and submit it to JPL upon request before contractual go live with Subcontractor website.

Section 1. Punchout Connection Requirements

1.1 Standards. The Subcontractor will allow JPL to punchout directly to its shopping site using either the Open Applications Group Extensible Markup Language (OAG XML) or the Commerce Extensible Markup Language (cXML) standard.

1.2 Authentication. The Subcontractor will provide JPL with any authentication information such as password and company credentials that JPL will need to successfully establish a punchout session.

1.3 Security. The Subcontractor shopping site should reside on a secure server and all punchout communications between the JPL Oracle iProcurement system and the Subcontractor shopping site should be done in Secure HyperText Transfer Protocol (HTTPS).

Section 2. Supplier Punchout Site Requirements

2.1 Initial Allowable Items List. JPL and the Subcontractor will agree upon a specific list of items that will be available to the JPL shopper (JPL designated catalog). Only these items should be viewable to the JPL shoppers when they punchout to the Subcontractor shopping site.

2.2 Amendments to the Allowable Items List. Any proposed changes to the Allowable Items List, including but not limited to the addition of the new items, the deletion of existing allowable items, or the modification in price of existing allowable items must be approved by both JPL and the Subcontractor.

2.3 Supplier Identification. The Subcontractor will provide JPL with an ID such as the DUNS (Dunn & Bradstreet) number that will uniquely identify the Subcontractor within the JPL Oracle iProcurement system.

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2.4 Category Mapping. JPL will provide two digit category codes that the Subcontractors shopping site will return to the JPL Oracle iProcurement System for all procured items. These codes are used for category data mapping only and does not in any way restrict the categorization of items on the Subcontractor shopping site. These category codes shall be returned as the first two digits of the UNSPSC code (*e.g. <Classification domain="UNSPSC">XX12356789</Classification>).*

2.5 Unit of Measurement Mapping. The Subcontractor will provide JPL with a comprehensive list of unit of measurements that the Subcontractor's shopping site supports.

2.6 Extra Attributes. The Subcontractor shopping site will provide mechanisms for returning any of the attributes listed in the Appendix 1 to the JPL Oracle iProcurement system whenever the JPL shopper procure items requiring any of the attributes.

2.7 Additional XML/cXML tag. The Subcontractor will provide an additional XML/cXML tag as stated below. This field is known as Configure ID in Oracle. It is an optional field but JPL requires it for uniqueness.

   <SupplierReferenceNumber> XML tag
   <SupplierPartAuxiliaryID>   cXML tag

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Jet Propulsion Laboratory (JPL)
Punchout Appendix 1

Appendix Date: 3/15/2017
Appendix Version: 1.0

General Information:

JPL Address: Jet Propulsion Laboratory
                                California Institute of Technology
                                4800 Oak Grove Drive
                                Pasadena, CA 91109-8099

Representative Name: Jamel Lee
Title: Enterprise System Analyst
Phone: (818) 354-1268
E-Mail (Internet):   Jamel.J.Lee@jpl.nasa.gov

Supplier Company Name:
Address:

Representative Name:
Title:
Phone:
E-Mail (Internet):

Punchout Standards:
Punchout will be conducted through one of the following XML formats – OAG XML
versions through 7.2.1 or cXML versions through 1.2.014.

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Jet Propulsion Laboratory (JPL)
Punchout Checklist Appendix 2

- ❑ Basic punchout connectivity
  - ○ *Subcontractor* Provide punchout method (OAG XML or cXML Direct).
    - i. \<PUNCHOUT METHOD\>
  - ○ *Subcontractor* Provide login URL to the site that JPL can use for **testing purposes.**
    - i. \<LOGIN URL\>
  - ○ *Subcontractor* Provide information needed for authentication, e.g., password, sender credential.
    - i. \<PASSWORD, SENDER CREDENTIAL, ETC.\>
  - ○ ***JPL* Setup iProcurement punchout catalog to Subcontractor site and ensure successful punchout connectivity.**
- ❑ JPL-specific View (allowable items only)
  - ○ *Subcontractor* Provide instructions on how JPL will be able to exclude unallowable items during the initial setup.
    - i. \<INITIAL SETUP\>
  - ○ *Subcontractor* Provide instructions on how, in the future, JPL will be able to review items that are newly added or changed **before they become visible to JPL end users**.
    - i. \<NEW ITEMS\>
    - ii. \<CHANGED ITEMS\>
  - ○ *Subcontractor* Specify attributes, e.g., DUNS number that JPL will need to send to the Subcontractor to enable the JPL specific view on the Subcontractor punchout site.
    - i. \<DUNS, ETC.\>
  - ○ ***JPL* Modify punchout catalog to send any additional attributes and ensure that users can now view only allowable items on the Subcontractor site.**
- ❑ Data Mapping
  - ○ *Subcontractor* Provide Subcontractor's DUNS number or other identification.
    - i. \<IDENTIFICATION\>
  - ○ *Subcontractor* Provide the common category for all the items in the JPL specific view.
    - i. \<CATEGORY NAME\>
  - ○ *Subcontractor* Provide a uom list encompassing the unit of measures for all of the items in the JPL specific view.
    - i. \<UOM LIST\>
  - ○ ***JPL* Set up data mapping and ensure that items from each possible category/uom combination can be successfully brought back and be automatically placed on a PO sourced to the correct Subcontractor.**

  - ○ *JPL* Provide Subcontractor with a two digit UNSPSC code for each category to be mapped.
    - i. \<CLASSIFICATION DOMAIN="UNSPSC"\>XX\</CLASSIFICATION\>
- ❑ Extra Attributes
  - ○ *JPL* Provide a list of additional item attributes that will be passed back.
    - i. \<EXTRA ATTRIBUTES\>

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- o *Subcontractor/JPL* Provide a list of punchout shopping cart OAG XML or cXML tags that will store the extra attributes.
    - i. <EXTRA ATTRIBUTE/XML LIST>
- o ***JPL* Bring back items and ensure that the extra attributes are populated.**